



Cisco IP Phone Key Expansion Module

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Cisco IP Phone Key Expansion Module Setup Overview



The Cisco IP Phone 8800 Key Expansion Module adds extra programmable buttons to the phone. The programmable buttons can be set up as phone line buttons, speed-dial buttons, or phone feature buttons. The following table lists the phones and the number of key expansion modules that each model supports.

Table 1: Cisco IP Phones and Supported Key Expansion Modules

Cisco IP Phone Model	Supported Key Expansion Modules
Cisco IP Phone 8851	2; providing 72 lines or buttons
Cisco IP Phone 8861	3; providing 108 lines or buttons

Key Expansion Module Power Information

If you use a key expansion module with your phone then Power over Ethernet (PoE) is enough to power your expansion modules. But a power cube is needed for smartphone or tablet charging when your expansion module is attached.

A key expansion module uses 48V DC, 5W per module. If you are charging a smartphone or a tablet, note the following:

- Side USB: Up to 500mA/2.5W charging
- Back USB: Fast charging, Supports up to 2.1A/10.5W charging

Table 2: Power-Supply Compatibility Table

Configuration	802.3af Power over Ethernet (PoE)	802.3at PoE	Cisco IP Phone Power Cube 4
8851 with 1 expansion module	Yes	Yes	Yes
8851 with 2 expansion modules	No	No See the third note above	Yes
8861 with 1 expansion module	No	Yes	Yes
8861 with 2 expansion modules	No	Yes See the first note above	Yes
8861 with 3 expansion modules	No	Yes See the first note above	Yes

**Note**

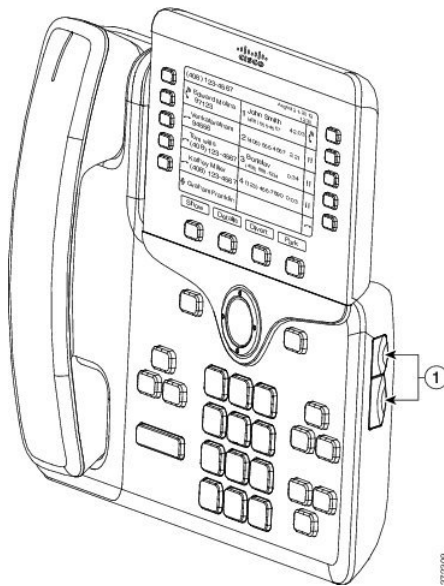
- The fast-charging feature on the back USB does not work when more than one expansion module is attached to a Cisco IP Phone 8861 using 802.3at PoE.
- The fast-charging feature on the back USB doesn't work when more than one expansion module is attached to a Cisco IP Phone 8861 unless Cisco Universal PoE (UPoE) is used.
- Cisco IP Phone 8851 with 2 expansion modules will work on 802.3at PoE only with v08 or later hardware. You can find the phone version information on the lower back of the phone as part of the TAN and PID label. Version information is also located on the individual phone packaging.

Connect a Key Expansion Module to a Cisco IP Phone

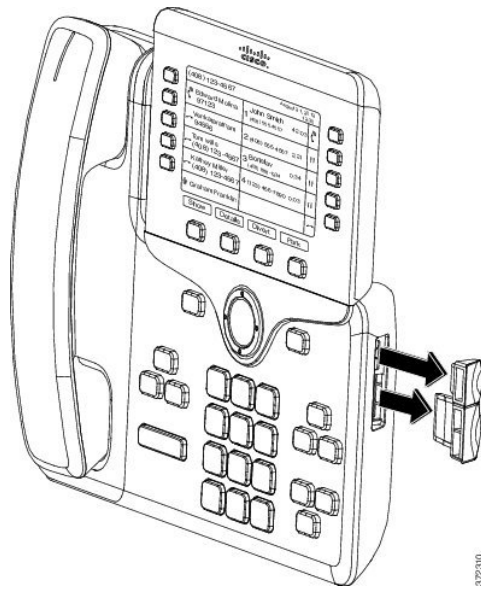
If you want to install more than one expansion module, you repeat steps 7-9 to connect the other expansion modules together.

Procedure

- Step 1** Unplug the Ethernet cable from the phone.
- Step 2** If installed, remove the footstand from the phone.
- Step 3** Locate the accessory connector covers on the side of the phone.
This diagram shows the location.



- Step 4** Remove the two accessory connector covers, as shown in the diagram.



Caution The slots are designed for the spine connector only. Insertion of other objects will cause permanent damage to the phone.

Step 5 Position the phone so that the front of the phone faces up.

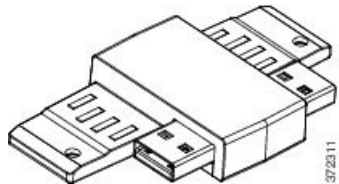
Step 6 Connect one end of the key expansion module spine connector to the accessory connector on the Cisco IP Phone.

a) Align the spine connector with the accessory connector ports.

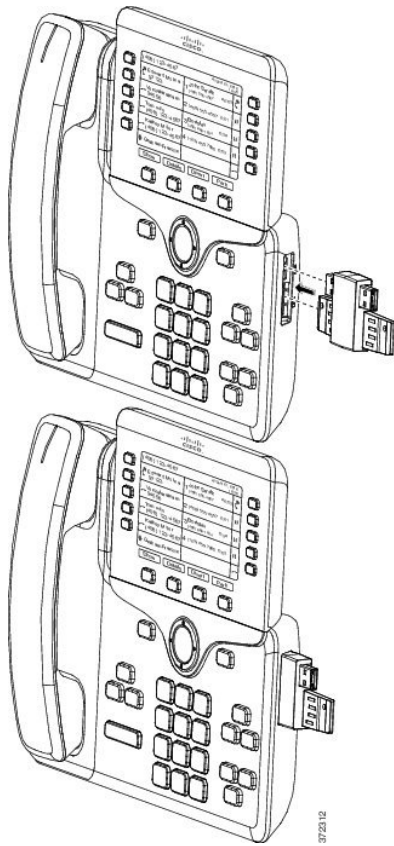
Note Install the connector in the orientation shown in the following diagrams.

b) Firmly press the spine connector into the phone.

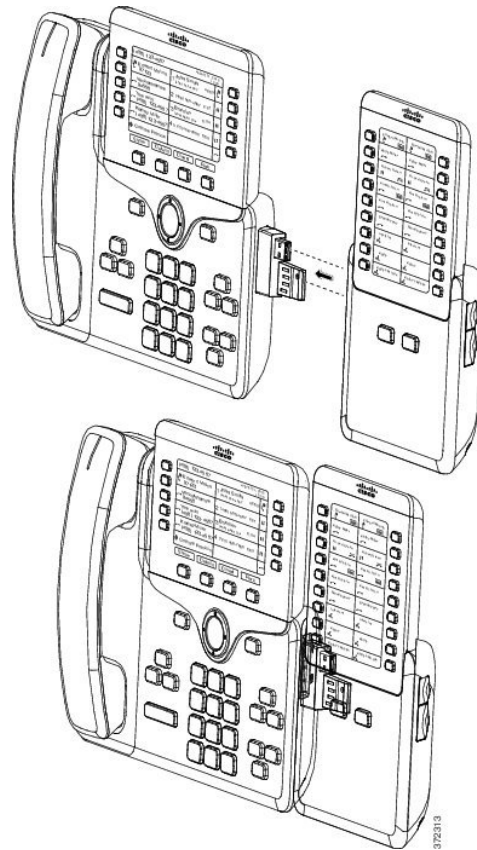
This diagram shows the spine connector.



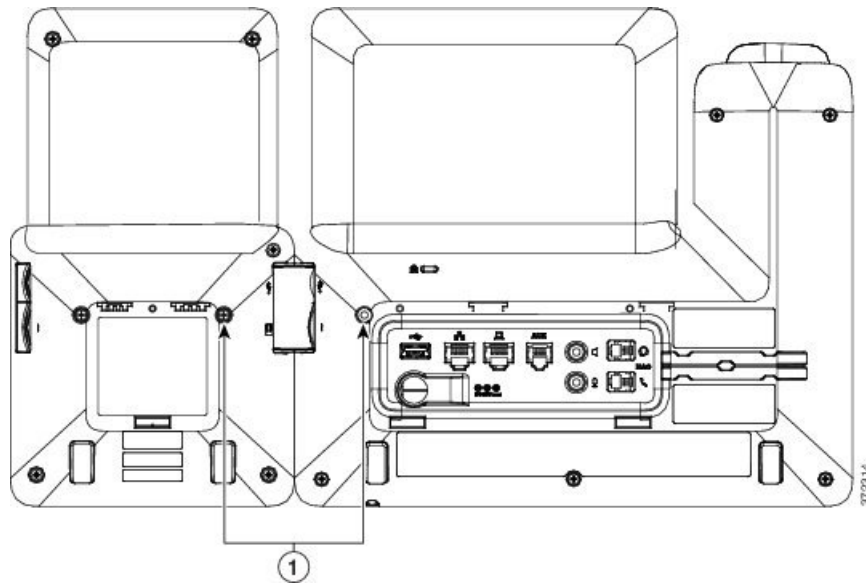
This diagram shows the installation of the spine connector.



- Step 7** Connect the other end of the spine connector to the key expansion module as shown in this diagram.
- Align the spine connector with the key expansion module accessory connector ports.
 - Firmly press the key expansion module into the spine connector.



- Step 8** (Optional) Use a second key expansion module spine connector to connect the second key expansion module to the first key expansion module.
- Step 9** (Optional) Use a third key expansion module spine connector to connect the third key expansion module to the second key expansion module.
- Step 10** Use a screwdriver to fasten the screws into the phone.
This step ensures that the phone and key expansion module remain connected at all times. This diagram shows the location of the screw holes on the phone and one key expansion module.



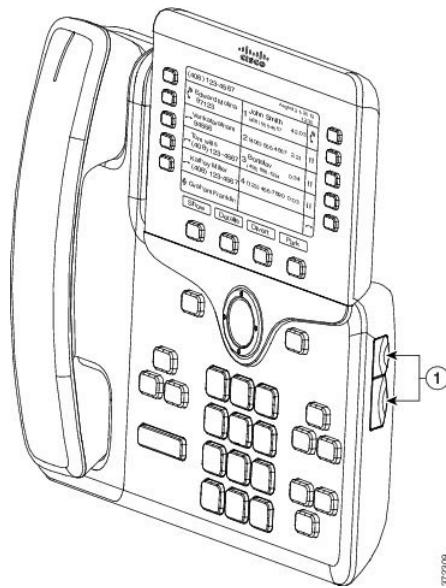
Note Make sure that the screws are fully inserted into the phone and tightened.

- Step 11** (Optional) Install the footstands on the phone and on the key expansion module, and adjust both footstands to rest evenly on the work surface.
- Step 12** Plug the Ethernet cable into the phone.

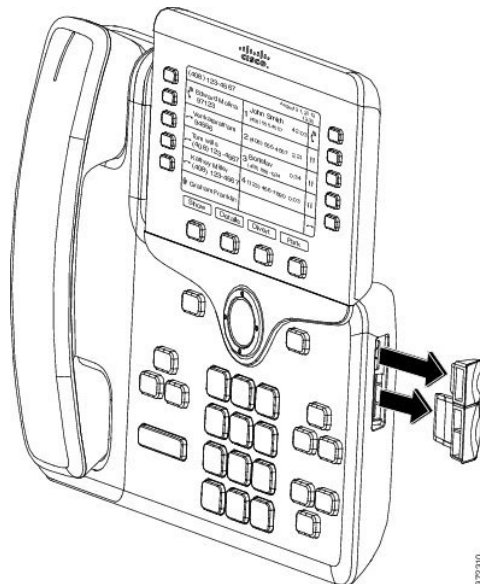
Connect Two or Three Key Expansion Modules to a Cisco IP Phone

Procedure

- Step 1** Unplug the Ethernet cable from the phone.
- Step 2** If installed, remove the footstand from the phone.
- Step 3** Locate the accessory connector covers on the side of the phone. This diagram shows the location.



Step 4 Remove the two accessory connector covers, as shown in the diagram.



Caution The slots are designed for the spine connector only. Insertion of other objects will cause permanent damage to the phone.

Step 5 Position the phone so that the front of the phone faces up.

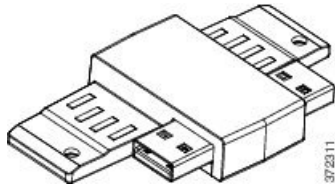
Step 6 Connect one end of the key expansion module spine connector to the accessory connector on the Cisco IP Phone.

a) Align the spine connector with the accessory connector ports.

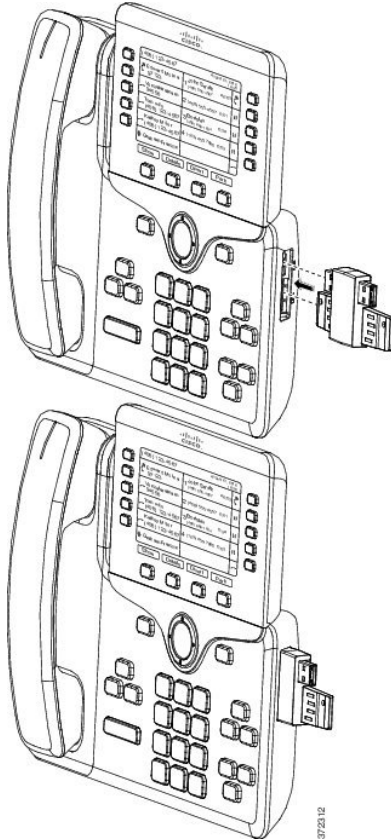
Note Install the connector in the orientation shown in the following diagrams.

b) Firmly press the spine connector into the phone.

This diagram shows the spine connector.



This diagram shows the installation of the spine connector.



Step 7 Connect the other end of the spine connector to the key expansion module as shown in this diagram.

- a) Align the spine connector with the key expansion module accessory connector ports.
- b) Firmly press the key expansion module into the spine connector.

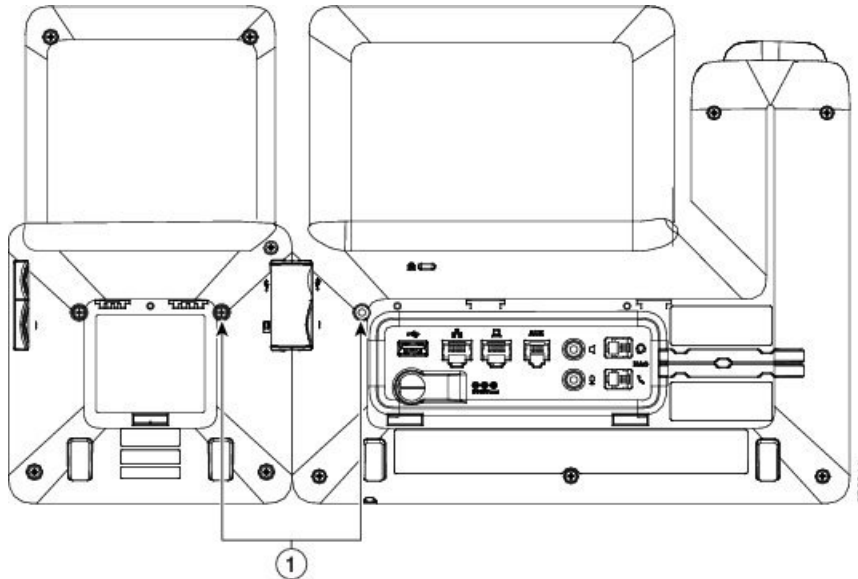
The first key expansion module is now connected to the Cisco IP Phone.

Step 8 Use a second key expansion module spine connector to connect the second key expansion module to the first key expansion module.

Step 9 Use a third key expansion module spine connector to connect the third key expansion module to the second (middle) key expansion module. This figure shows a Cisco IP Phone with three key expansion modules attached.



- Step 10** Use a screwdriver to fasten the screws into the phone and into each key expansion module. This step ensures that the phone and key expansion modules remain connected at all times. This diagram shows the location of the screw holes.



Note Make sure that the screws are fully inserted into the phone and tightened.

- Step 11** (Optional) Install the footstands on the phone and on the key expansion modules, and adjust all footstands to rest evenly on the work surface.
- Step 12** Plug the Ethernet cable into the phone.

Auto Detection of Key Expansion Modules

You can configure a new phone to auto-detect the maximum number of key expansion modules that it supports. For these phones, the **Number of Units** field shows the maximum number of key expansion modules that the phone supports as the default value. When a user adds key expansion modules to these phones, the module lights up and is enabled automatically. Default value of this field is 2 for Cisco IP Phone 8851 and 3 for Cisco IP Phone 8861. Navigate to **Admin Login > Advanced > Voice > Att Console** to check the value of the **Number of Units** field.

If your user has an older release phone and it is upgraded to the current release, you can change the configuration of the phone so that when the user adds a key expansion module to the phone, it lights up and is enabled automatically.

Configure the Key Expansion Module from the Phone Web Page

You can set up your Key Expansion Module from the phone web page.

Procedure

- Step 1** On the phone web page page, click **Admin Login** > **Advanced** > **Voice** > **Attendant Console**.
- Step 2** From the **Number of Units** list, select the number of supported key expansion modules.
- Step 3** Click **Submit All Changes**.
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Access Key Expansion Module Setup

After you install one or more key expansion modules on the phone and configure them in the Configuration Utility page, the phone automatically recognizes the key expansion modules.

When multiple key expansion modules are attached, they are numbered according to the order in which they connect to the phone:

- Key expansion module 1 is the expansion module closest to the phone.
- Key expansion module 2 is the expansion module in the middle.
- Key expansion module 3 is the expansion module farthest to the right.

When the phone automatically recognizes the key expansion modules, you can then choose the **Show Details** softkey for additional information about the selected key expansion module.

Procedure

- Step 1** On the phone, press **Applications** .
- Step 2** Press **Status** > **Accessories**.
All properly installed and configured key expansion modules display in the list of accessories.
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Reset the Single LCD Screen Key Expansion Module

If you are having technical difficulties with your Cisco IP Phone 8800 Key Expansion Module, you can reset the module to the factory default settings.

Procedure

- Step 1** Restart the expansion module by disconnecting the power source, waiting a few seconds, and then reconnecting it.
 - Step 2** As the expansion module powers up, press and hold **Page 1**. As the LCD screen turns white, continue pressing **Page 1** for at least one second.
 - Step 3** Release **Page 1**. The LEDs turn red.
 - Step 4** Immediately press **Page 2** and continue pressing **Page 2** for at least one second.
 - Step 5** Release **Page 2**. The LEDs turn amber.
 - Step 6** Press Lines **5, 14, 1, 18, 10**, and **9** in sequence.
The LCD screen turns blue. A spinning icon is displayed in the center of the screen.
The key expansion module resets.
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Troubleshoot the Key Expansion Module

Procedure

- Step 1** Open a CLI.
 - Step 2** Enter the following command to enter debug mode:
debugsh
 - Step 3** Enter ? to see all available commands and options.
 - Step 4** Use the applicable commands and options to find the desired information.
 - Step 5** To exit debug mode, press **Ctrl-C**.
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